

# **The Road to the Objective Force**



**Tactical Wheeled Vehicles Conference  
January 29, 2002**

**LTG John S. Caldwell, Jr.**

**Military Deputy to the Assistant Secretary of the  
Army (Acquisition, Logistics and Technology)  
and Director, Army Acquisition Corps**



# Leadership Priorities have not Changed

## People

“To build our future force, the Armed Services must continue to attract America's best people, with good pay and good living conditions. Our military culture must reward new thinking, innovation, and experimentation.”

## Readiness

“When I committed U.S. forces to this battle, I had every confidence that they would be up to the task. And they have proven me right.”

## Transformation

“The need for military transformation was clear. . .before September the 11th. What's different today is our sense of urgency -- the need to build this future force while fighting a present war. It's like overhauling an engine while you're going at 80 miles an hour. Yet we have no other choice. . .the challenge of military transformation. . .is now the military and moral necessity of our time. Our military has a new and essential mission. For states that support terror, it's not enough that the consequences be costly – they must be devastating.”



**President George W. Bush**  
**December 11, 2001**



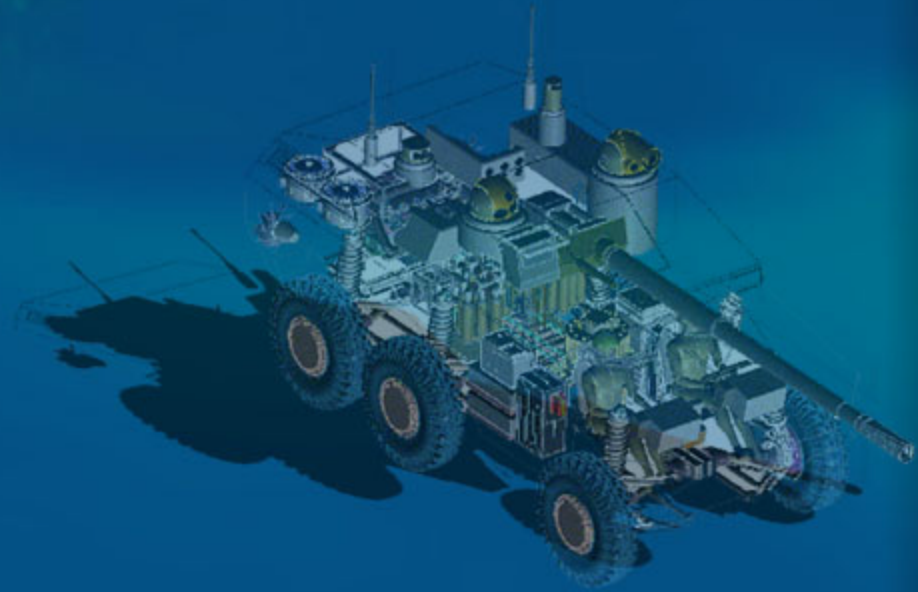
# How Can We Create An Objective Force?



1963 **19 Years To Develop One New Combat Vehicle** 1982



2000 **Only 8 Years To Develop A New Army** 2008



**Do What You Gotta Do!**



# Do What You Gotta Do!

(Garth Brooks)

Sometimes you've got to take the heat  
If you're gonna walk down on the mean street  
Take the heat and you see it through  
'Cause sometimes it comes down to  
Do what you gotta do

Sometimes it goes right down to the wire  
And you might have to walk through the fire  
Walk on, boy, all the way through  
'Cause sometimes it just comes down to  
Do what you gotta do

(Chorus)

Well there's people that'll tell you its just no use  
And there's people that'll tell you that you're gonna lose  
People that'll tell you anything your going to listen to  
Do what you gotta do





# Do What You Gotta Do! (cont)

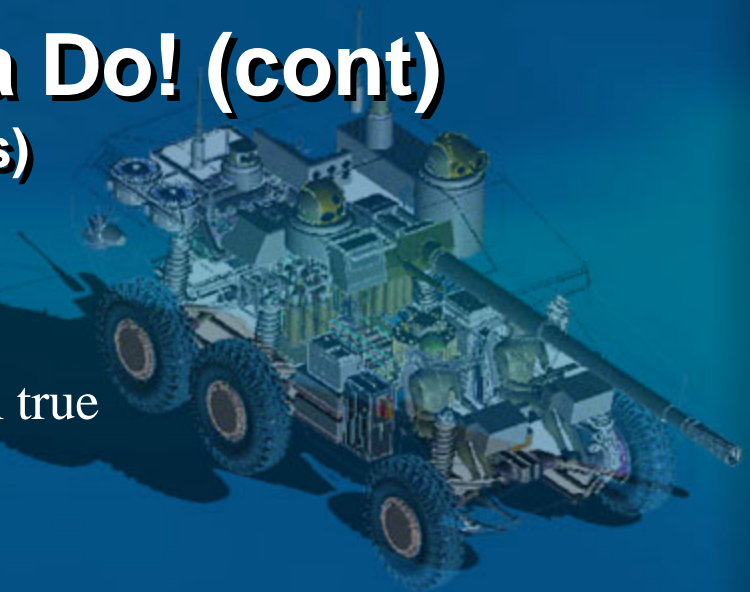
(Garth Brooks)

Someday they're going to call your name  
They'll come looking for someone to blame  
What's your name, boy, hey you just tell them true  
'Cause they can't take the truth from you  
So do what you gotta do

(Chorus)

Well, they'll call you a hero or a traitor  
But you'll find out that, sooner or later,  
Nobody in this world is going to do it for you  
Do what you gotta do

There ain't nobody in this world  
That's gonna do it for you  
Do what you gotta do



# Modeling and Simulation Are Essential to Field the Objective Force In This Decade

2008



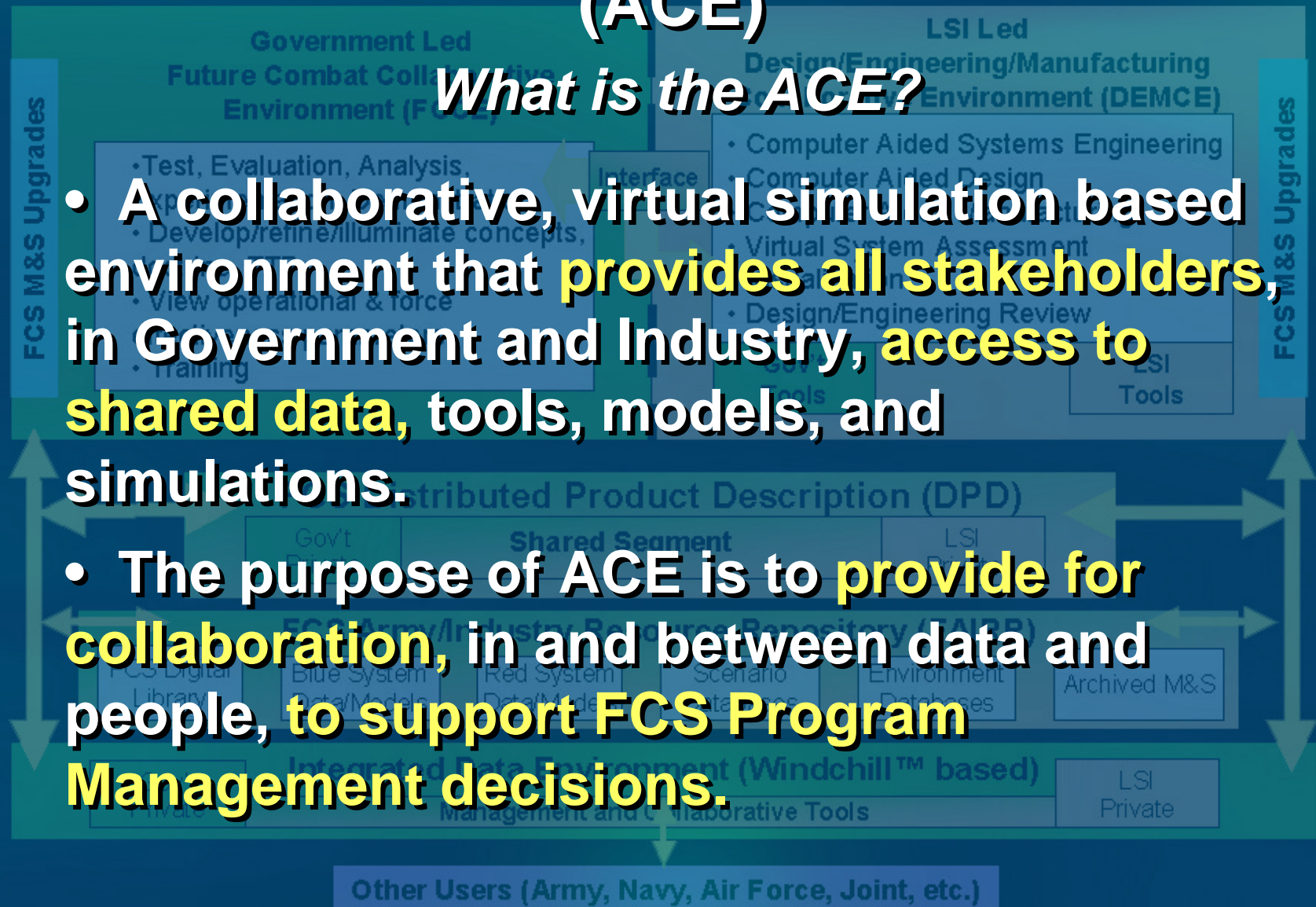
- Design Faster
- Collaborate Easier
- Explore Alternative Designs



# FCS Advanced Collaborative Environment (ACE)

## *What is the ACE?*

- A collaborative, virtual simulation based environment that **provides all stakeholders**, in Government and Industry, **access to shared data**, tools, models, and simulations.
- The purpose of ACE is to **provide for collaboration**, in and between data and people, to support FCS Program Management decisions.





# The Synergy of Collaboration

## Why is ACE important?



- Shortens the Cycle Time
- Lower Risk... Fewer Hidden Issues
- Make Better Quality Decisions
- Early Consensus
- Saves Money

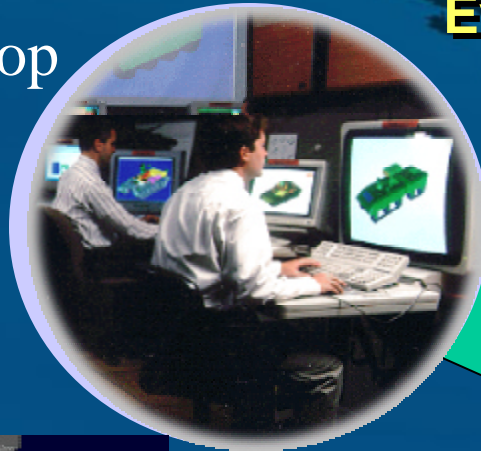
- We only have until 2008
- Everything has to work
- Everything has to fit

# What the Army is Doing

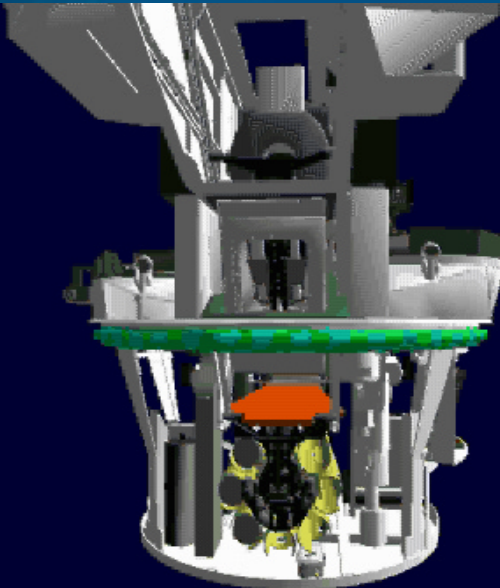
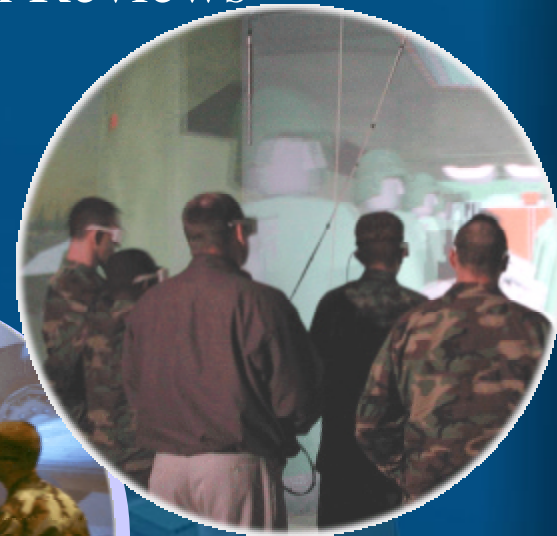
## *Interim Armored Vehicle Variants*

**Virtual System Prototypes and Collaborative  
Evaluations with Industry**

From the Desktop

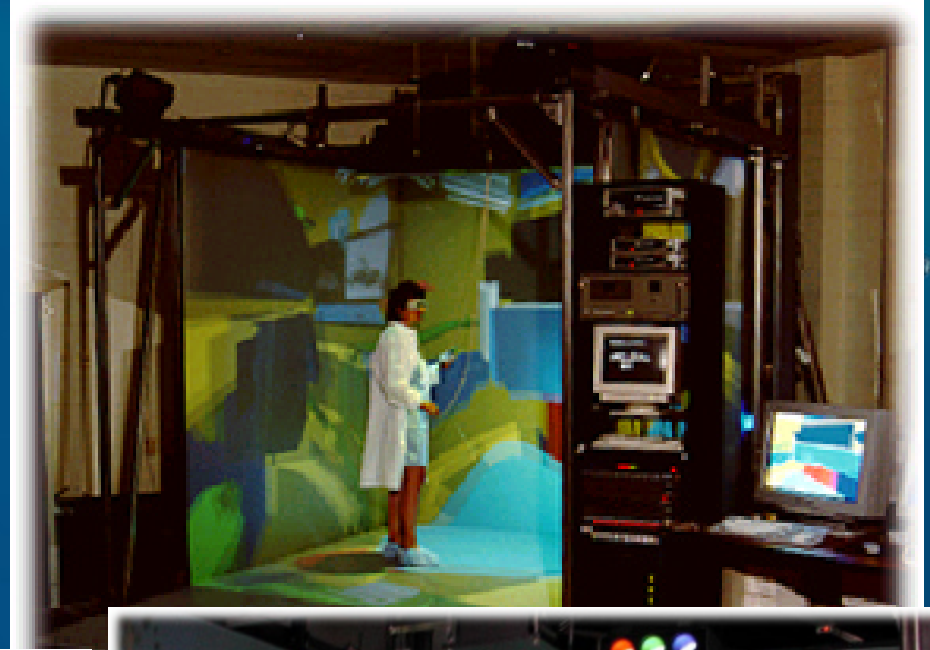
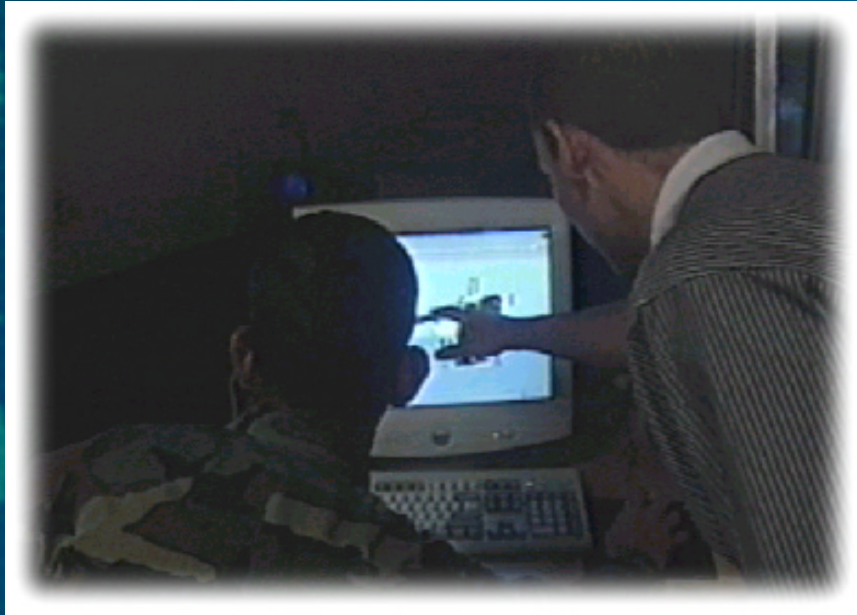


To 3D Immersive  
Design Reviews





# Using ACE to Evaluate FCS Variants



# Future Tactical Truck System Virtual Prototype Approach

## C4I Capabilities Modeled

- Data Logging System
- Combat Satellite Link
- GPS & Map Display
- Interactive Technical Manuals (ITEMS)



## Immersive Design Reviews

- Crew Station
- Mission Equipment
- Load Handling



## Performance Analyses

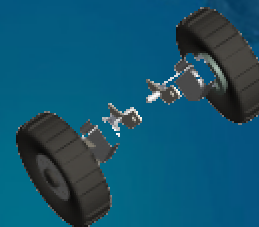


## Survivability

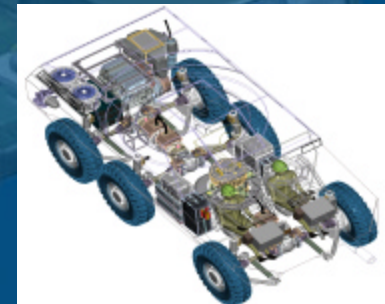
- Reduce Signature
- Situational Awareness



## Mobility



## CHPs

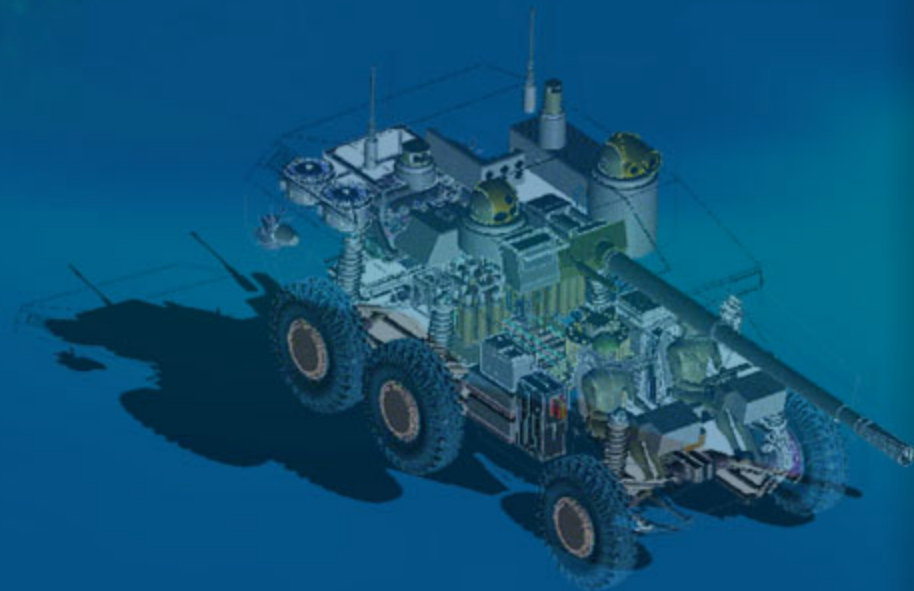




# Challenges for Our Team

- **We are at war – have a sense of urgency in everything that you do.**
- **The pace of Army Transformation will accelerate – the Technology is ready, are YOU?**
- **HQDA and Acquisition Corps Reorganization is happening – don't waste energy worrying about this.**
- **We need innovators to field FCS this decade – we need YOU to get there.**





**Do What You Gotta Do!**

